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**Assessment of biological remains from excavations at Whithorn Priory,
Galloway (site code:1995.0292)**

by

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Summary

A group of sediment samples and human bones, from deposits of 8th to 12th century date at Whithorn Priory, Galloway, have been assessed for their bioarchaeological potential.

Truncation of many of the graves renders separation of individual skeletons problematic and has ensured that much of the material is poorly preserved and heavily fragmented. However, information regarding numbers of individuals, age, sex and pathology was noted and it is recommended that a full archive report be produced and the data be assimilated with as yet unpublished material recovered from earlier excavations.

Some plant remains were present in the samples but in numbers too small to be of any interpretative value. Invertebrate remains (insects and intestinal parasites) were absent from the material assessed.

Keywords: WHITHORN; GALLOWAY; ASSESSMENT; NORTHUMBRIAN; MEDIEVAL; HUMAN REMAINS; PLANT REMAINS

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Introduction

Whithorn Priory and its environs have been subjected to several excavations, the latest of which was undertaken in 1995 by Amanda Clarke of the York Archaeological Trust, with funding provided by the Whithorn Trust. The main trench was located on the hill top to the west of the ruined nave, where some previous excavation had already uncovered a series of possible 11th - 12th century inhumations (Pollock 1994). The recent excavation has uncovered part of an earlier Northumbrian (7/8th century) graveyard as well as additional later medieval material.

Approximately fifty graves were excavated in all, the vast majority (40) being Northumbrian in date. The two distinct phases of the graveyard indicate that it was in use for some considerable amount of time. However, a layer containing large quantities of metal working debris, representing a period of small scale industry, divides the two phases.

A total of 21 'GBA' samples (*sensu* Dobney *et al.* 1992) and 9 boxes of human bone recovered from the recent excavations were submitted to the EAU for assessment of their bioarchaeological potential.

Methods

Sediment samples

All of the GBA samples were inspected in the laboratory and, on the basis of this inspection and of information supplied by the excavator, fourteen were selected for further analysis. A description of the lithology of these fourteen samples was recorded using a standard *pro forma*. Subsamples of 1 kg were taken from thirteen of the GBAs for extraction of

macrofossil remains, following procedures of Kenward *et al.* (1980; 1986).

With the exception of three samples (72/T, 73/T and 74/T), 'washovers' were taken rather than 'flots', as the organic content of the samples was extremely low. The remaining sample, (Sample 68) was bulk-sieved to 1 mm, and the residue sorted for finds.

The flots and residues resulting from processing were examined for plant and invertebrate macrofossils and bone.

A single small spot sample (Context 2224, Sample 78) was briefly examined and commented upon.

Parasite squashes

Three 'pelvic' samples (54, 56 and 80) were examined for the eggs of parasitic nematodes using the methods outlined by Dainton (1992).

Human bone

All the excavated human skeletal material was scanned and a basic archive produced (see Table 2). Determination of gender and age was carried out, where possible, using methods described by Brothwell (1981), and any additional relevant information was also recorded.

Results

Sediment samples

Details of the nature of the sediments and the results obtained can be found in Table 1.

None of the washovers or flots produced quantities of biological remains useful for interpretation. Small numbers of charred grains were present in Samples 62, 69, 75 and 76, and included fragments identified as oat (*Avena*), wheat (*Triticum*), barley (*Hordeum*) and ?rye (cf. *Secale*). Two samples (57 and 67) contained single charred weed seeds. Pieces of charcoal, ranging in size from 2mm to 25mm, were recovered from all but two (Samples 73 and 74) of the flots and washovers. Thirteen of the samples were contaminated by modern roots and/or rootlets. No invertebrates were recorded from any of the processed samples.

The residues were mostly stone, gravel and sand, with Samples 68, 72 and 75 (Contexts 2207 2235 and 2271) containing tiny (to 2 mm) fragments of charcoal. Slivers of burnt bone were recorded in the residues from Samples 67 and 81.

The spot sample contained traces of mineralised wood, probably not identifiable.

No parasite eggs were identified from the 'squashes', which were mostly of inorganic material, with traces of organic detritus.

Human bone

An archive of the human remains can be found in Table 2.

Preservation of the human remains was mostly very poor, with the surfaces of almost all fragments appearing extremely eroded the broken surfaces 'battered' in appearance, and the material often heavily comminuted. The shallowness of the deposits, free draining nature of the subsoil, and intercutting of many of the earlier graves, had obviously hastened the destruction of much of the human remains from the cemetery.

This poor preservation meant that much of the basic information (e.g. age and gender) was difficult to determine and could only be tentative. Forty-nine groups of bones could be attributed an approximate age-at-death, of which 22 were either juvenile or sub-adult (i.e. <16 years). Of the twenty-seven records of adults, only two had achieved advanced years (in this case >50 years). The remains of only six individuals were recorded as male, whilst nine were female.

Except for the appearance of enamel hypoplasia on a single canine (Context 2126) and moderate calculus deposits on teeth from Context 2284, little evidence of pathology was observed. Although poor preservation is a significant factor in this low frequency, several points of interest can be highlighted, most notably the elliptical damage recorded on the molars of individuals from contexts 2015, 2142 and 2156. Such deterioration is relatively rare and its presence within this limited assemblage may imply a familial connection. The adult and sub-adult skull fragments from Context 2278 also showed a possible genetically linked phenomenon (wormian bones) which may imply that these individuals, too, were related. In addition, careful examination showed that four of the grave cuts (2071, 2142, 2276 and 2316), previously believed to include the remains of single individuals, contained the remains of two individuals (in each case an adult and a child).

Discussion and statement of potential

Sediment samples

Ancient plant remains from these samples were confined to moderate amounts of charcoal and a few charred grains, of little interpretative significance. Overall, the

sediment samples offer no potential for further interpretation of the site.

Human bones

The analysis of bones excavated throughout the 1995 season has contributed some, limited, information about several aspects of burial practices at Northumbrian Whithorn. However, the soil type, and consequent poor quality of the material, means that there is limited potential for detailed inferences concerning the past human population.

Similarly poorly preserved human remains were recovered in 1993 (Pollock 1994: 14-15) and significantly more material has been recorded in previous years which, as yet, remains unpublished. This archive of human skeletal data was not made available for comparison with the limited material from the 1995 excavations and, as a result, it is difficult to place this latest material in its wider academic context. However, human skeletal remains of this date and from this region are rare, particularly from a site of such high ecclesiastical status,

Recommendations

Sediment samples

No further work on the present material is recommended. If deposits with organic preservation by anoxic waterlogging, or concentrations of charred plant material, are exposed during further excavation, however, every effort should be made to sample and investigate them.

Human bone

Although the material from the 1995 excavations on its own is of limited interpretative value, it does form part of a larger archive of important material. It is therefore recommended that a detailed record of the human skeletal remains from 1995 be made for archival purposes and (if publication schedules allow) that the data be assimilated with those from earlier excavations, and published together.

Retention and disposal

The human bones should be retained for the present. The samples should be retained until report publication in case any new questions arise which might be addressed using them.

Archive

All the residues, washovers and flots, are currently stored in the Environmental Archaeology Unit, University of York, along with all bone, and paper and electronic records pertaining to the work described here.

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References

- Brothwell, D. (1972). *Digging up bones*. London: British Museum (Natural History).
- Dainton, M. (1992). A quick, semi-quantitative method for recording nematode gut parasite eggs from archaeological deposits. *Circaea, the Journal of the Association for Environmental Archaeology* 9 (for 1991), 58-63.
- Dobney, K., Hall, A. R., Kenward, H. K. and Milles, A. (1992). A working classification of sample types for environmental archaeology. *Circaea, the Journal of the Association for Environmental Archaeology* 9 (for 1991), 24-6.
- Kenward, H. K., Engleman, C., Robertson, A., and Large, F. (1986). Rapid scanning of urban archaeological deposits for insect remains. *Circaea* 3 (for 1985), 163-72.
- Kenward, H. K., Hall, A. R. and Jones, A. K. G. (1980). A tested set of techniques for the extraction of plant and animal macrofossils from waterlogged archaeological deposits. *Science and Archaeology* 22, 3-15.
- Pollock, D. (1994). *Whithorn 6. Interim report on the 1993 excavations at Whithorn Priory*. The Whithorn Board of Management.

Table 1. Results of assessment of GBA, BS and SPOT samples from Whithorn.

Context no.	Sample no.	Context type	Matrix and biota	Comments
2013	51	Layer	Not processed. Charcoal from this sample included ?hazel (cf. <i>Corylus</i>)	
2013	52	Layer	Not processed. Charcoal from this sample included ?hazel (cf. <i>Corylus</i>)	
2071	57	Levelling material	The sediment was described as very stony, slightly clay silt. The residue consisted mainly of very small (2-6 mm) and small (6-20 mm) stones and little else. The washover contained quite large amounts of modern roots, some charcoal (<10 mm) a small number of modern earthworm egg capsules and a single charred cornfield weed seed. No invertebrates were recorded.	Insufficient evidence for any useful interpretation
2112	66	Deposit within wall	The sediment was described as a very stony sandy silt. The residue was made up almost entirely of sand and gravel. The washover recovered from this sample was of modest size, consisting of a small quantity of charcoal (<10 mm) and sand. Modern rootlets, fragments of plant detritus, some earthworm egg capsules, and traces of ?metal corrosion were also noted. No invertebrates were recorded.	
2117	58	Pit backfill	The sediment was described as very stony sandy silt. The small residue was mainly sand and gravel. The washover contained only small amounts of charcoal (<15 mm), some sand and a few modern roots. No invertebrates were recorded.	
2207	68	Pit backfill	The sediment was described as a very stony sandy silt. All sizes of stones (2-60+ mm) were noted in the residue, sand, gravel and medium to large stones forming the main component. A few fragments of charcoal, a piece of slag, and some slivers of burnt tooth enamel and bone were also present.	
2224	78	Grave fill	Not processed. There was a trace of mineralised wood, probably not identifiable, in this tiny spot sample.	Insufficient material for any useful interpretation.

Context no.	Sample no.	Context type	Matrix and biota	Comments
2235	72	Ditch backfill	The sediment was described as moderately stony, slightly sandy, slightly clay silt. The residue contained a little charcoal <10 mm, but was mostly sand and gravel. The small flot comprised a few modern roots, a few grains of sand, and charcoal fragments <2 mm. No invertebrates were recorded.	Insufficient evidence for any useful interpretation.
2241	73	Ditch backfill	The sediment was described as moderately stony, slightly sandy, clay silt. As with the previous residue, sand and gravel predominated. Only traces of modern roots were noted from the flot. No invertebrates were recorded.	Insufficient evidence for any useful interpretation.
2242	76	Deposit associated with furnace?	The sediment was described as slightly stony, silty clay. The residue was of sand and gravel, with no organic component. Medium-sized (20 - 60 mm) stones were common. There were several moderately preserved charred grain including barley (<i>Hordeum</i>), in the washover, along with traces of modern root. Charcoal (<20 mm) was noted in moderate amounts; it included some fragments identified as ?hazel (cf. <i>Corylus</i>). No invertebrates were recorded.	
2247	77	Deposit associated with furnace	The sediment was described as moderately stony, slightly sandy silt. The residue comprised mainly sand and gravel, including many medium (20 - 60 mm) and large (>60 mm) stones. The washover produced modern rootlets, a few wood fragments including round wood to 15 mm, and a small number of earthworm egg capsules. Charcoal (<20 mm) was, however, the main component, with some fragments identified as ?hazel. No invertebrates were recorded.	
2249	74	Ditch backfill	The sediment was described as moderately stony, slightly sandy, clay silt. Sand and gravel were abundant in the residue. This sample yielded a tiny flot containing very small amounts of plant debris and sand grains. No invertebrates were recorded.	Insufficient evidence for any useful interpretation.

Context no.	Sample no.	Context type	Matrix and biota	Comments
2271	75	Post-hole fill	The sediment was described as silty clay with ash. The residue was mainly sand and gravel, with a few small (<10 mm) charcoal fragments and a single charred grain. The large washover contained moderate amounts of charcoal (<25 mm), including oak (<i>Quercus</i>), some plant detritus and many earthworm egg capsules. Charred grain was also noted. No invertebrates were recorded	The charcoal is more likely to have come from structural timbers than from twigs. There is no direct evidence to suggest decay in situ.
2278	81	Grave fill	The sediment was described as moderately stony, silty clay. The residue consisted of sand and gravel and included a single burnt bone fragment. Charcoal (<15 mm), including oak and ?hazel fragments, sand, modern roots and a few flakes of bone (<10 mm) were present in the washover. No invertebrates were recorded.	No evidence to support or refute the interpretation that this deposit is the fill of a collapsed log coffin burial.
4005	62	Layer	The sediment was described as slightly stony, slightly clay silt. The residue contained only sand and gravel. The small to medium washover consisted of a little charcoal (<5 mm) and a few rather poorly preserved charred grain, including wheat (<i>Triticum</i>), barley (<i>Hordeum</i>) and ?rye (cf. <i>Secale</i>). Modern rootlets and grass fruits were also present. No invertebrates were recorded.	An occupation deposit but there is too little evidence from this sample to support or refute the
4008	67	Layer	The sediment was described as moderately stony, slightly clay silt. Sand and gravel made up the main part of the residue, with a single fragment of burnt bone also noted. The washover gave only traces of charcoal (<5mm), some modern rootlets, a modern seed and a few earthworm egg capsules. The charred seed of a cornfield weed was also recorded. No invertebrates were recorded, other than the worm capsules.	Insufficient evidence for any useful interpretation.
4018	69	Layer	The sediment was described as slightly stony, slightly clay silt. The residue was similar to the previous samples, being mostly sand and gravel. The washover comprised mainly sand, and small amounts of charcoal (to 5mm). Small numbers of charred grains, some only just charred, were present. Some were identified as oats (<i>Avena</i>), barley and ?wheat. No invertebrates were recorded.	If the deposit is from a flooding episode then it must incorporate an ash/ occupation deposit.

Table 2. Archive of human remains

Context	Small find number		
2015	34	Bones present:	Molar tooth and various bone fragments (one non-human).
		Sex:	?
		Age:	?
2014	35	Bones present:	Teeth fragments
		Sex:	?
		Age:	Immature
2028	110	Bones present:	Teeth
		Sex:	?
		Age:	Young adult
		Notes:	Single canine showing hypoplasia
2030	130	Bones present:	Fragments of long bones
		Sex:	?
		Age:	?
2073	215	Bones present:	Fragments of skull and tooth
		Sex:	?
		Age:	Young adult (20-25 years)
2083	224	Bones present:	Fragments of upper limb shaft
		Sex:	?
		Age:	?
2071	273	Bones present:	Six teeth
		Sex:	?
		Age:	One adult and one sub-adult represented (see notes)
		Notes:	Teeth represent two individuals
2142	389	Bones present:	Fragments of skull, teeth and femur
		Sex:	?
		Age:	One adult and one immature individual (see notes)
		Notes:	Teeth represent two individuals. Molar shows elliptical damage
2099	406	Bones present:	Several teeth
		Sex:	?
		Age:	?
2063	481	Bones present:	Teeth

Context	Small find number		
		Sex:	?
		Age:	Young adult
2198	593	Bones present:	Fragmented tooth
		Sex:	?
		Age:	?
2222	617	Bones present:	Teeth
		Sex:	?
		Age:	Adult
2245	642	Bones present:	Fragmented tooth
		Sex:	?
		Age:	?
2293	728	Bones present:	Fragments of teeth
		Sex:	?
		Age:	?
2278	730	Bones present:	Fragments of skull, teeth, limbs and ribs
		Sex:	Adult skull, possibly male
		Age:	One sub-adult and one adult present
		Notes:	Two individuals represented. Both skulls exhibit wormian bones. Sub-adult exhibits condition along lambdoid suture, whilst adult shows feature along sagittal suture. Adult crania also shows possible trauma on left parietal bone.
2276	739	Bones present:	Fragments of skull, teeth and metatarsals.
		Sex:	?
		Age:	Fragments of skull represent an adult while teeth represent an immature individual (the latter represented by numerous unerupted permanent crowns)
		Notes:	Two individuals represented
2253	742	Bones present:	Fragments of skull, left femur and teeth
		Sex:	?
		Age:	Sub-adult
2292	744	Bones present:	Fragments of skull
		Sex:	?
		Age:	?
2142	756	Bones present:	Fragments of pelvis, skull, mandible and teeth
		Sex:	?

Context	Small find number		
		Age:	?
2284	759	Bones present:	Fragments of skull, several vertebrae, long bones and teeth
		Sex:	?
		Age:	Young adult (20-25 years)
		Notes:	Dental calculus present on some of the teeth
2303	761	Bones present:	Fragments of skull, mandible and teeth
		Sex:	?
		Age:	Adult (30-40 years)
2281	766	Bones present:	Fragments of skull
		Sex:	?
		Age:	?
2313 (skeleton 2316)	769	Bones present:	Fragments of skull and teeth
		Sex:	?
		Age:	?
2002	800	Bones present:	Fragments of skull
		Sex:	?
		Age:	?
2008	801	Bones present:	Fragments of skull and teeth
		Sex:	?
		Age:	Young adult (20-25 years)
2025	802	Bones present:	Several teeth
		Sex:	?
		Age:	Immature individual
		Notes:	Several molars were un-erupted
2033	803	Bones present:	Fragments of long bone
		Sex:	?
		Age:	?
2039	804	Bones present:	Fragments of long bone
		Sex:	?
		Age:	?
2043	805	Bones present:	Fragments of skull, vertebrae, clavicle, pelvis, phalanges, mandible and teeth

Context	Small find number		
		Sex:	Male
		Age:	Adult (25-35 years)
2055	806	Bones present:	Fragments of skull, maxilla and teeth
		Sex:	?
		Age:	Sub-adult
2079	807	Bones present:	Fragments of skull
		Sex:	?
		Age:	?
2082	808	Bones present:	Fragments of skull, vertebrae, mandible and teeth
		Sex:	?
		Age:	Juvenile (10-12 years)
2104	809	Bones present:	Fragments of pelvis, lower limb, tarsals, metatarsals and phalanges
		Sex:	?
		Age:	?
2106	810	Bones present:	Fragments of skull, vertebrae, ribs, scapula, pelvis, upper and lower limbs
		Sex:	?
		Age:	Adult (25-35 years)
2114	811	Bones present:	Fragments of skull, pelvis, upper and lower limbs
		Sex:	Male
		Age:	Adult
2122	812	Bones present:	Fragments of skull and ribs
		Sex:	?
		Age:	Adult
2124	813	Bones present:	Near complete left femur and fragments of long bones
		Sex:	?
		Age:	Adult.
2126	814	Bones present:	Several teeth and fragments of long bones
		Sex:	?
		Age:	Immature
2128	815	Bones present:	Fragments of skull, femur and tibia
		Sex:	?
		Age:	Adult

Context	Small find number		
2129	816	Bones present:	Fragments of skull
		Sex:	?
		Age:	Adult
2130	817	Bones present:	Fragments of unidentifiable bone
		Sex:	?
		Age:	?
2137	818	Bones present:	Fragments of skull, ribs, pelvis, humerus, tibia, fibula and phalanges
		Sex:	?
		Age:	Immature (10-15 years)
2138	819	Bones present:	Fragments of skull, vertebrae, tarsals and long bones
		Sex:	?
		Age:	?
2143	821	Bones present:	Fragments of skull, and vertebrae
		Sex:	Male
		Age:	Adult
2146	822	Bones present:	Fragments of humerus and tibia
		Sex:	?
		Age:	?
2153	823	Bones present:	Fragments of long bones
		Sex:	?
		Age:	?
2156	824	Bones present:	Three eroded molars
		Sex:	?
		Age:	?
		Notes:	Elliptical damage to molars
2165	825	Bones present:	Fragments of skull
		Sex:	Female
		Age:	Adult
2168	826	Bones present:	Fragments of the long bones
		Sex:	?
		Age:	?
2172	827	Bones present:	Fragments of skull and tibia

Context	Small find number		
		Sex:	?
		Age:	?
2175 (= 2206)	828	Bones present:	Fragments of skull
		Sex:	Female
		Age:	Adult
2188	829	Bones present:	Fragments of skull
		Sex:	?
		Age:	Immature
2192	830	Bones present:	Fragments of skull and vertebrae
		Sex:	?
		Age:	?
2196	831	Bones present:	Fragments of skull
		Sex:	?
		Age:	?
2206	832	Bones present:	Fragments of skull and vertebrae
		Sex:	Male
		Age:	Adult (25-30 years)
2208	833	Bones present:	Fragments of skull, vertebrae, radius, ulna, pelvis and both lower limbs
		Sex:	Female
		Age:	Late adulthood (50+ years)
2225	834	Bones present:	Fragments of skull, ribs, clavicle and tibia
		Sex:	Female
		Age:	Young adult: (20-25 years)
2232	835	Bones present:	Fragments of skull, vertebrae, upper and lower limb bones
		Sex:	Male
		Age:	?
2240	836	Bones present:	Fragments of skull, scapula and ribs
		Sex:	?
		Age:	?
2254	837	Bones present:	Fragments of skull, cervical vertebrae (axis and atlas), upper and lower limbs
		Sex:	?

Context	Small find number		
		Age:	Adult
2262	838	Bones present:	Fragments of skull
		Sex:	?
		Age:	?
2267	839	Bones present:	Fragments of skull, upper and lower limbs
		Sex:	?
		Age:	Sub-adult
2270	840	Bones present:	Unidentifiable bone
		Sex:	?
		Age:	?
2279	841	Bones present:	Fragments of skull, vertebrae, ribs, sacrum, pelvis, upper and lower limbs
		Sex:	Female
		Age:	Late adulthood (50+ years)
2283	842	Bones present:	Fragments of skull
		Sex:	Female
		Age:	Adult
2285	843	Bones present:	Fragments of skull, pelvis, ulna, humerus, radius and carpals
		Sex:	Female
		Age:	Young adult (20-25 years)
2287	844	Bones present:	Several unidentifiable bone fragments
		Sex:	?
		Age:	?
2288	845	Bones present:	Fragments of skull, vertebrae, pelvis, upper and lower limbs
		Sex:	?
		Age:	Young adult
2298	846	Bones Present:	Fragments of skull
		Sex:	?
		Age:	Adult
2302	847	Bones present:	Fragments of skull
		Sex:	Female
		Age:	Young adult
2306	848	Bones present:	Fragments of skull, vertebrae, scapula, lower and upper limbs

Context	Small find number		
		Sex:	Female
		Age:	Adult (30-40 years)
2308	849	Bones present:	Fragments of skull and vertebrae
		Sex:	?
		Age:	Adult (30-40 years)
2314 (=2240)	850	Bones present:	Fragments of vertebrae, ribs, pelvis and tibia
		Sex:	?
		Age:	Sub-adult
2316	851	Bones present:	Fragments of skull and long bones
		Sex:	Male skull (see notes)
		Age:	Adult skull. Immature long bones (see notes)
		Notes:	Skull does not appear to be same individual as post-cranial bones
20002	852	Bones present:	Fragments of skull
		Sex:	?
		Age:	?